

## REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1-32 are pending, of which claims 1-6, 8-9, and 11-32 have been amended. Support for the amendments can be found in the specification at least at p.4 lines 1-11, and at p.14, line 24 to p.16, line 25.

### Drawing Objections

The drawings are objected to as failing to comply with 37 C.F.R. §1.84(p)(5) because they include a reference number not mentioned in the description. The drawings are also objected to under 37 C.F.R. §1.83(a) for failing to show Fig. 3 as described in the specification. The drawings are also objected to under 37 C.F.R. §1.83(b) because they are incomplete (*Office Action* pp. 2-4).

A complete set of corrected, replacement drawing sheets 1-4 (for Figs. 1-4) are provided herewith in compliance with 37 C.F.R. §1.121(d). As originally filed, Fig.3 was an inadvertently omitted flow diagram, and the final figure which was intended to be designated as Fig.4 was instead incorrectly designated as Fig.3. In addition, the one flow diagram which was originally included was not clearly indicated as being Fig.2.

No new matter has been added by the corrected drawing sheets. The Office is reminded that information which was disclosed in the (a) specification, (b) claims, or (c) drawings as originally filed does not constitute new matter (MPEP §§608.04; 2163.06; and 2163.07(a)).

Corrected Fig.3 merely conforms the drawings to the specification, as the flow diagram of corrected Fig.3 is described in detail in the specification as originally filed. For example, the "Brief Description of Drawings" indicates that

1 "Fig. 3 is a flow diagram depicting an exemplary filtering process to process an  
2 input message" (*Specification* p.3). The "Exemplary Methodological  
3 Implementation" illustrated in Fig. 3 is described in detail on page 16 of the  
4 specification, and includes reference numbers which refer to the various blocks of  
5 the flow diagram shown in corrected Fig.3 (*Specification* p.16).

6 Corrected Fig.4 also merely conforms the drawings to the specification, as  
7 corrected Fig.4 is described in detail in the specification as originally filed. For  
8 example, the "Brief Description of Drawings" indicates that "Fig. 4 is a diagram of  
9 an exemplary computing environment in which the implementations described  
10 herein may operate" (*Specification* p.3). The "Exemplary Computer Environment"  
11 illustrated in Fig.4 is described in detail on pages 17-22 of the specification, and  
12 includes reference numbers which refer to the various components shown in  
13 corrected Fig.4 (*Specification* p.16). As originally filed, the drawing which is now  
14 provided as corrected Fig.4 was incorrectly designated as Fig.3, and appropriate  
15 correction has been made.

16 Corrected Fig.2 also merely conforms the drawings to the specification, as  
17 corrected Fig.2 is described in detail in the specification as originally filed.  
18 Corrected Fig.2 includes only a minor revision to clearly designate the drawing as  
19 being Fig.2. The "Exemplary Methodological Implementation" illustrated in Fig.2  
20 is described in detail on pages 14-16 of the specification, and includes reference  
21 numbers which refer to the various blocks of the flow diagram shown in corrected  
22 Fig. 2 (*Specification* pp. 14-16).

23 Accordingly, Applicant requests that the drawing objections be withdrawn.  
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1        **35 U.S.C. §112 Claim Rejections**

2        **A.**     Claims 1-6, 8, 11-14, 23-29, and 32 are rejected under  
3        35 U.S.C. §112 second paragraph, as being indefinite (*Office Action* p.4).  
4        Specifically, the Office indicates that the term “optimized” is a relative term that  
5        renders the claims indefinite. Without conceding the propriety of the stated  
6        rejection, amendments to claims 1-6, 8, 11-14, 23-29, and 32 have been provided  
7        herein to distinctly claim the subject matter. The amendments are fully supported  
8        under 35 U.S.C. §112, 1<sup>st</sup> paragraph, at least at page 7, lines 7-14 and at page 9,  
9        lines 12-18 of the specification as-filed.

10       **B.**     Claims 3-6 and 8 are also rejected for terms lacking sufficient  
11       antecedent basis and/or for indefinite terms. Appropriate amendments have been  
12       provided herein. Accordingly, Applicant requests that the §112 rejections be  
13       withdrawn.

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15       **35 U.S.C. §101 Claim Rejection**

16       Claims 15-22 are rejected under 35 U.S.C. §101 as being directed to  
17       non-statutory subject matter (*Office Action*, p.6). Appropriate amendments have  
18       been provided herein and Applicant requests that the §101 rejection be withdrawn.

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20       **35 U.S.C. §102 Claim Rejection**

21       Claims 1-32 are rejected under 35 U.S.C. §102(b) as being anticipated by a  
22       publication entitled “Efficient Filtering of XML Documents for Selective  
23       Dissemination of Information” by Mehmet Altinel, et al., 26<sup>th</sup> VLDB Conference,  
24       Cairo, Egypt, dated 2000 (*hereinafter*, “Altinel”) (*Office Action* p.7). Applicant  
25       respectfully traverses the rejection.

1 **Claim 1** recites a method, comprising:

2 receiving an input;

3 determining whether the input can be processed by a selective  
4 sub-engine which supports only a subset of a query language; and

5 if the determining indicates that the input can be  
6 processed by the selective sub-engine, then directing the  
7 input to the selective sub-engine for processing, since the  
8 selective sub-engine can process the input in less time  
than a general sub-engine which fully supports the query  
language would require to process the input;

9 if the determining indicates that the input cannot be  
10 processed by the selective sub-engine, then directing the  
11 input to the general sub-engine for processing; and

12 processing the input to derive a result.

13  
14 Altinel does not show or disclose each and every element recited in claim 1.  
15 For example, Altinel does not show or disclose “determining whether the input can  
16 be processed by a selective sub-engine which supports only a subset of a query  
17 language”, as recited in claim 1.

18 Instead, Altinel describes using index organizations and search algorithms  
19 for performing efficient filtering of XML documents for large-scale information  
20 dissemination systems (*Altinel*, Abstract). The system of Altinel includes (1) an  
21 event-based parser for incoming XML documents; (2) an XPath parser for user  
22 profiles; (3) a filter engine, which performs the matching of documents to the  
23 profiles; and (4) a dissemination component, which sends the filtered data to the  
24 appropriate users (*Altinel* p.56, second full paragraph).  
25

As shown in Fig. 2 of Altinel, the described system uses a single filter engine which contains a single inverted index (*i.e.*, a sophisticated index structure called the “Query Index”) (*Altinel* p.56 fifth full paragraph; Fig.2). Altinel describes that the “heart” of the system is the single filter engine, which relies on an index structure and a modified Finite State Machine (FSM) approach to quickly locate and check relevant profiles (*Altinel*, p. 56, third full paragraph).

The Office cites to Altinel pages 55-57 (*Office Action*, p.7). However, the cited section of Altinel does not show or disclose “determining whether the input can be processed by a selective sub-engine which supports only a subset of a query language”, as recited in claim 1. Instead, this section of Altinel describes that “[w]hen a document arrives at the Filter Engine, it is run through an XML Parser which then drives the process of checking for matching profiles in the Index” (*Altinel* p.57, §4.2, first paragraph, underline added).

Altinel does not show or disclose a selective sub-engine which supports only a subset of a query language, but instead only describes an index to locate relevant profiles in the single filter engine (*Altinel*, p.56 Fig. 2 and third full paragraph). Accordingly, Altinel does not show or disclose “determining whether the input can be processed by a selective sub-engine which supports only a subset of a query language”, as recited in claim 1.

Further, Altinel does not show or disclose that “if the determining indicates that the input can be processed by the selective sub-engine, then directing the input to the selective sub-engine for processing in less time than would be required by a general sub-engine which fully supports the query language”, as recited in claim 1.

The Office cites to Altinel pages 55-56, §3, ¶4 (*Office Action* p.7). However, the cited section of Altinel instead relates to using “triggers” in

1 traditional database systems, and states that “triggers solutions are typically not  
2 optimized for fast matching of individual items to vast numbers of relatively  
3 simple queries” (*Altinel*; pp. 55-56, §3, ¶4). Accordingly, Altinel does not show or  
4 disclose “directing the input to the selective sub-engine for processing in less time  
5 than would be required by a general sub-engine which fully supports the query  
6 language”, as recited in claim 1.

7 Still further, Altinel does not show or disclose that “if the determining  
8 indicates that the input cannot be processed by the selective sub-engine, then  
9 directing the input to the general sub-engine for processing”, as recited in claim 1.  
10 As described herein, Altinel does not show or disclose a selective sub-engine  
11 which supports only a subset of a query language, but instead only an index to  
12 locate relevant profiles in a single filter engine (*Altinel* p.56 third full paragraph;  
13 Fig.2). Accordingly, Altinel cannot show or disclose that “if the determining  
14 indicates that the input cannot be processed by the selective sub-engine, then  
15 directing the input to the general sub-engine for processing”, as recited in claim 1.  
16 The system described in Altinel only describes the use of a single filter engine  
17 which contains a single sophisticated index structure called the “Query Index”  
18 (*Altinel* p.56 fifth full paragraph; Fig.2).

19 Accordingly, claim 1 along with dependent claims 2-7 are allowable over  
20 Altinel for at least these reasons and Applicant requests that the §102 rejection be  
21 withdrawn.  
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1 **Claim 8** recites a filter engine, comprising:

2 at least one selective sub-engine configured to accept an input  
3 and process the input against a filter table associated with the  
4 selective sub-engine, wherein the selective sub-engine is configured  
to process only a subset of terms of an input language;

5 a general sub-engine configured to accept an input and  
6 process the input against a filter table associated with the general  
7 sub-engine, wherein the general sub-engine is configured to process  
only all terms of the input language; and

8 an analyzer configured to determine whether the input can be  
9 processed by the selective sub-engine and, if so, directing the input  
10 to the selective sub-engine for processing or, if not, directing the  
input to the general sub-engine for processing.

11  
12 Altinel does not show or disclose each and every element recited in claim 8.  
13 For example, Altinel does not show or disclose “at least one selective sub-engine  
14 configured to accept an input and process the input against a filter table associated  
15 with the selective sub-engine, wherein the selective sub-engine is configured to  
16 process only a subset of terms of an input language” as recited in claim 8. As  
17 described above in response to the rejection of claim 1, Altinel appears to rely on a  
18 single general filter engine for processing (*Altinel* p.56 third full paragraph; Fig.2).  
19 Accordingly, Altinel does not show or disclose “at least one selective sub-engine  
20 configured to accept an input and process the input against a filter table associated  
21 with the selective sub-engine, wherein the selective sub-engine is configured to  
22 process only a subset of terms of an input language”, as recited in claim 8.

23 Further, Altinel does not show or disclose “an analyzer configured to  
24 determine whether the input can be processed by the selective sub-engine and, if  
25 so, directing the input to the selective sub-engine for processing or, if not,

1 directing the input to the general sub-engine for processing”, as recited in claim 8.  
2 As described above in response to the rejection of claim 1, Altinel does not show  
3 or disclose a selective sub-engine which supports only a subset of a query  
4 language, but instead describes an index to locate relevant profiles in a single filter  
5 engine (*Altinel* p.56 third full paragraph; Fig.2). Accordingly, Altinel cannot show  
6 or disclose “an analyzer configured to determine whether the input can be  
7 processed by the selective sub-engine and, if so, directing the input to the selective  
8 sub-engine for processing or, if not, directing the input to the general sub-engine  
9 for processing”, as recited in claim 8.

10 Accordingly, claim 8 along with dependent claims 9-14 are allowable over  
11 Altinel for at least these reasons, and Applicant requests that the §102 rejection be  
12 withdrawn.  
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**Claim 15** recites: One or more computer-readable storage media containing computer-executable instructions that, when executed on a computer, perform the following steps:

determining an appropriate sub-engine to which an input message should be directed for processing against a set of queries;

processing the input message in a selective sub-engine if the selective sub-engine comprises a grammar that supports processing of the input message;

processing the input message in a general sub-engine if the selective sub-engine grammar does not support processing of the input message; and wherein:

the input message is in accordance with a query language;

the selective sub-engine supports a subset of the query language; and

the general sub-engine supports the entire query language.

Altinel does not show or disclose each and every element recited in claim 15. For example, Altinel does not show or disclose “determining an appropriate sub-engine to which an input message should be directed for processing against a set of queries” as recited in claim 15. As described above in response to the rejection of claim 1, Altinel describes a single general filter engine for processing (*Altinel* p.56 third full paragraph; Fig.2). Accordingly, Altinel does not show or disclose “determining an appropriate sub-engine to which an input message should be directed for processing against a set of queries” as recited in claim 15.

Further, since Altinel relies on a single general filter engine for processing, Altinel does not show or disclose “processing the input message in a selective

1 sub-engine if the selective sub-engine comprises a grammar that supports  
2 processing of the input message” and “processing the input message in a general  
3 sub-engine if the selective sub-engine grammar does not support processing of the  
4 input message”, as recited in claim 15.

5 Accordingly, claim 15 along with dependent claims 16-22 are allowable  
6 over Altinel for at least these reasons, and Applicant requests that the §102  
7 rejection be withdrawn.

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9 **Claim 23** recites a message processing system, comprising:

10 means for receiving a message;

11 a selective sub-engine which supports only a subset of a  
12 message language;

13 a general sub-engine which supports all of the message  
14 language;

15 analyzing means for analyzing the message to determine if the  
16 selective sub-engine is configured to process the message;

17 distribution means for distributing the message to the  
18 selective sub-engine if the selective sub-engine can process the  
19 message or to the general sub-engine if the selective sub-engine  
20 cannot process the message.

21 Altinel does not show or disclose each and every element recited in  
22 claim 23. For example, Altinel does not show or disclose “a selective sub-engine  
23 which supports only a subset of a message language” and “a general sub-engine  
24 which supports all of the message language”, as recited in claim 23. Instead, as  
25 described herein, Altinel appears to rely on a single general filter engine for

1 processing (*Altinel* p.56 third full paragraph; Fig.2). Further, Altinel does not  
2 show or disclose an “analyzing means for analyzing the message to determine if  
3 the selective sub-engine is configured to process the message”, as recited in  
4 claim 23.

5 Accordingly, claim 23 along with dependent claims 24-32 are allowable  
6 over Altinel for at least these reasons, and Applicant requests that the \$102  
7 rejection be withdrawn.

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9 **Conclusion**

10 Pending claims 1-32 are in condition for allowance and Applicant  
11 respectfully requests issuance of the subject application. If any issues remain that  
12 preclude issuance of the application, the Examiner is urged to contact the  
13 undersigned attorney before issuing a subsequent Action.

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15 Respectfully Submitted,

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17 Dated: Nov. 8, 2006

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